IN THE CLAIMS:

1. (Previously Presented) An apparatus for charging a battery comprising

a charging circuit for providing a charging current to the battery;

a temperature sensor positioned to sense a temperature of said battery;

a controller coupled to said temperature sensor and said charging circuit and operable to control said charging circuit in accordance with said temperature, said controller being operable to minimize said charging current when said temperature is higher than a first predetermined threshold value, said controller being operable to set said charging current to a maximum value when said temperature is lower than a second predetermined threshold value, said maximum value being the battery's maximum specified charging current, and said second predetermined threshold value being the battery's maximum charging temperature; and

a memory coupled to said controller, said memory having a temperature and charging current look up table stored therein, whereby said controller accesses said look up table to set said charging current.

2. (Original) The apparatus of Claim 1 wherein said controller continuously sets said charging current in accordance with said temperature.

3. (Previously Presented) The apparatus of Claim 1 wherein said controller periodically sets said charging current in accordance with said temperature.

Claims 4 - 7 (Canceled)

8. (Original) The apparatus of Claim 1 wherein the battery is coupled to a load, and wherein said temperature sensor senses that temperature of the battery and the load.

9. (Previously Presented) An apparatus for exercising a battery, comprising

a charging circuit having a charging current output coupled to the battery;

a temperature sensor positioned to sense a temperature related to the battery temperature;

a discharging circuit having a variable impedance load and a discharging current input coupled to the battery;

a controller coupled to said temperature sensor, said charging circuit, and said discharging circuit, said controller operable to set said charging current in accordance with said temperature, and operable to set said discharging current in accordance with said temperature, said controller being operable to minimize said charging current when said temperature is higher than a first predetermined threshold value; and

a memory coupled to said controller having a look up table with temperature versus discharging current and values of said variable impedance load stored therein, whereby said controller accesses said look up table to set said discharging current.

10. (Original) The apparatus of Claim 9 and wherein said controller continuously sets said discharging current in accordance with said temperature.

11. (Previously Presented) The apparatus of Claim 9 and wherein said controller periodically sets said discharging current in accordance with said temperature.

Claims 12 - 13 (Canceled)

14. (Previously Presented) The apparatus of Claim 9 and wherein said controller is operable to set said discharging current to a maximum value when said temperature is lower than a second predetermined threshold value.

15. (Previously Presented) The apparatus of Claim 9 wherein said maximum value is the battery's maximum specified discharging current and said first predetermined threshold value is the battery's maximum discharging temperature.

16. (Canceled)

17. (Original) The apparatus of Claim 9 wherein said temperature sensor senses the temperature of the battery and said discharging circuit.

18. (Previously Presented) A method of charging a battery comprising the steps of:

sensing a temperature related to the battery temperature;

setting a charging current in accordance with said sensed temperature, further including the step of setting said charging current to a maximum value when said temperature is lower than a first predetermined threshold value, said maximum value being the battery's maximum specified charging current, and said first predetermined threshold value is the battery's maximum charging temperature and minimizing said charging current when said temperature is higher than a second predetermined threshold value; and

charging the battery at said charging current.

19. (Original) The method of Claim 18 and wherein said sensing and setting steps are repeated continuously during said charging step.

20. (Original) The method of Claim 18 and wherein said sensing and setting steps are repeated periodically during said charging step.

Claims 21 - 24 (Canceled)

25. (Original) The method of Claim 18 wherein the battery is coupled to a load, and wherein said sensing step includes sensing the temperature of the battery and the load.

26. (Previously Presented) A method of exercising a battery, comprising the steps of:

sensing a temperature related to the battery temperature;

setting a discharging current in accordance with said temperature by recalling a discharging current corresponding to said sensed temperature from a look up table;

discharging the battery at said discharging current with a discharging circuit having a variable impedance load, the impedance of said load being selected from said look up table;

discontinuing said discharging step when a predetermined battery voltage is reached;

setting a charging current in accordance with said temperature, said setting step further including the step of minimizing said charging current when said temperature is higher than a first predetermined threshold value; and

charging the battery at said charging current.

27. (Original) The method of Claim 26 and wherein said sensing and setting a discharge current steps are repeated continuously during said discharging step.

28. (Original) The method of Claim 26 and wherein said sensing and setting a discharge current steps are repeated periodically during said discharging step.

29. (Canceled)

30. (Previously Presented) The method of Claim 26 and wherein said setting step includes setting said discharging current to a maximum value if said temperature is lower than a second predetermined threshold.

31. (Original) The method of Claim 30 and wherein said maximum value is the battery's maximum specified discharging current, and said first predetermined threshold is the battery's maximum discharging temperature.

32. (Canceled)

33. (Previously Presented) The method of Claim 26 wherein the battery is coupled to a load, and wherein said sensing step includes the step of sensing the temperature of the battery and the load.

Claims 34 - 38 (Canceled)

39. (Previously Presented) An apparatus for charging a battery coupled to a load, said apparatus comprising:

a charging circuit for providing a charging current to the battery;

a temperature sensor positioned to sense a temperature of said battery and said load; and

a controller coupled to said temperature sensor and said charging circuit and operable to control said charging circuit in accordance with said temperature, said controller being operable to set said charging current to a maximum value when said temperature is lower than a first predetermined threshold value, said maximum value being the battery's maximum specified charging current, and said first predetermined threshold value is the battery's maximum charging temperature and said controller being operable to minimize said charging current when said temperature is higher than a second predetermined threshold value.

Claims 40 – 41 (Canceled)

42. (Previously Presented) A method of charging a battery coupled to a load comprising the steps of:

sensing a temperature related to the battery temperature and the load temperature;

setting a charging current in accordance with said sensed temperature, further including the step of setting said charging current to a maximum value when said temperature is lower than a first predetermined threshold value, said maximum value being the battery's maximum specified charging current, and said first predetermined threshold value is the battery's maximum charging temperature and minimizing said charging current when said temperature is higher than a second predetermined threshold value; and

charging the battery at said charging current.

43. (Previously Presented) A method of exercising a battery coupled to a load, the method comprising the steps of:

sensing a temperature related to the battery temperature and the temperature of the load;

setting a discharging current in accordance with said temperature;

discharging the battery at said discharging current;

discontinuing said discharging step when a predetermined battery voltage is reached;

setting a charging current in accordance with said temperature, said setting step further including the step of minimizing said discharging current when said temperature is higher than a first predetermined threshold value; and

charging the battery at said charging current.